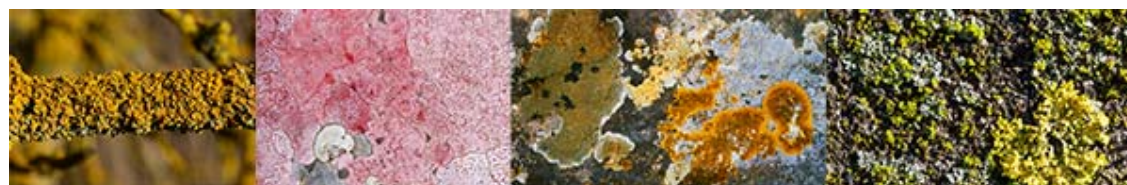




Newsletter
2/2014



GEO BON Newsletter

Do GEO BON and lichens have something in common? Lichens are composite organism consisting of a fungus, a green algae and often a cyanobacteria. These are things as different as scientists working in remote sensing, database management and zoology. Lichens are nature's multidisciplinary approach to make something great at places and under conditions, where few organisms could work alone. In GEO BON, all partners can still be successful alone within their disciplines but we are heading for products and success, which can only be achieved by a multidisciplinary team. As the lichens, we are heading for an ambitious goal; our hot and dry rock to be settled, is to establish the global Biodiversity Observation Network. GEO BON joins the fungus and the algae to do so!

This newsletter tells you some news from that field.

Jörg Freyhof

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Jörg Freyhof





GEO BON Implementation Committee and Advisory Board meeting at iDiv

GEO BON, the Biodiversity Observation Network of the Group on Earth Observations, has a global mission to support the CBD, IPBES and many others with a scientifically robust framework for observations on the detection of biodiversity change through all its scales from genes to ecosystem services. To do so, GEO BON is organized in nine working groups each focussed on a major field of biodiversity observation plus regional BON's that implement biodiversity observing activities in certain regions of the globe (e.g. the Arctic, Southeast Asia, etc.). To discuss the activities of the working groups and the regional BON's, and to take advice from the GEO BON Advisory Board, 17 members of the Implementation Committee as well as eight members of the Advisory Board came together for a three day meeting, 15th-18th June 2014 at iDiv. This meeting was also used to assess the progress of GEO BON towards its 2015 deliverables and it turns out that GEO BON is well on track! Most of the major deliverables are ready or in a good state of progress and the GEO BON scientists enthusiastically discussed new frontiers and challenges in biodiversity observation, developing the Essential Biodiversity Variables, how to go ahead with new projects and how to implement harmonized national monitoring schemes. Furthermore, the proposals to the GEO BON call were presented and discussed.

GEO BON's call for "EBV-relevant data products and monitoring guidelines" very well received

In April 2014, GEO BON announced its first open call for small projects to support the developments of EBV's and monitoring guidelines. Twenty-four excellent proposals had been submitted from all over the world asking together for about 1.2 Million Euro. But

sadly, only about 120.000 Euro were available for this call. We had three, very serious selection rounds and applied different criteria. To find a consensus on which projects to support was really a challenge.

Finally, we selected these five proposals:

- Black Listing Invasive Species for Monitoring and Reporting submitted by Monash University
- BON in a Box submitted by the Humboldt Institute,
- Developing guidelines for standardised global butterfly monitoring, submitted by UNEP-WCMC and Dutch Butterfly Conservation
- Finalizing, visualizing and communicating global remote-sensing supported species EBVs and change indicators submitted by Yale University.
- Remote sensing of Essential Biodiversity Variables submitted by Twente University

Meanwhile we have started the negotiations with the institutes winning the competition and the GEO BON community will be regularly updated on the success of these GEO BON projects.

GEO BON at the GEO Work Plan Symposium and the GEO European Projects Workshop

To strengthen GEO BON's links to other members of the GEO family, Gary Geller, Michele Walters and myself visited the GEO Work Plan Symposium 28 - 30 April 2014 in Geneva and I also visited the GEO European Projects Workshop 12 - 13 June 2014 in Athens.

Both meetings were exceptionally interesting. GEO and GEOSS really made a huge progress in the last years and GEOSS, cooperating with Google, has now established a new website and really goes ahead providing vast amounts of observation data. This development will help GEO BON a lot to set up its own data portal and infrastructure. Furthermore it was good to learn about other Essential



Variable initiatives and also about regional initiatives as [AfriGEOSS](#) and many others. As GEO BON, GEO orients much towards the users of its products and activities and opens for the private sector. In Athens, an overwhelming number of European projects from all societal benefit areas presented their activities including EU BON and GEO BON. A Draft Summary of outcomes of the GEO meeting is available [here](#). The abstracts of the European projects workshop are available [here](#).

Global Ecological Land Units (ELUs) Draft Map Produced

Roger Sayre

A team of scientists from USGS and ESRI have just produced a first draft map of global terrestrial ecosystems at a base resolution of 250 m. This effort, a deliverable from Working Group 3 of GEO BON, will result in the most recent, finest spatial resolution to date map of terrestrial ecosystems of the planet. The ecosystems are modeled from global datalayers on bioclimate regions, land surface forms, lithology, and land cover. Approximately 3600 Ecological Land Units (ELUs) have been identified in initial modeling. The ELUs are intended to be useful for studying climate change impacts to ecosystems, assessing economic and social value of ecosystem goods and services, systematic biodiversity conservation planning, and research on ecosystem structure, function, and condition. The audience for these products is primarily the scientific community. Following publication, the data will be made available on a number of dissemination platforms, including the GEO BON portal.



[More info](#)

Sourcebook for Biodiversity Monitoring in Tropical Forests - a Joint GOFC-GOLD/GEO BON Initiative



Mike Gill

The Global Observation of Forest Cover and Land Dynamics (GOFC-GOLD) and GEO BON are collaborating to lead the development of a sourcebook on biodiversity monitoring in tropical forests. The sourcebook is intended to serve as an annually updated methods and procedures guide for using remote sensing for biodiversity monitoring and conservation purposes in tropical forests and will be used in association with the REDD+ mechanism to address the issue of conserving healthy and functioning tropical forest ecosystems. The first workshop was held on May 24th in London, United Kingdom bringing together representatives from tropical regions, universities and conservation organizations to discuss the structure, content and approach for developing the sourcebook. The first version of the sourcebook is expected to be released in June 2016 and will be a component of GEO BON's BON in a Box (Biodiversity Observation Network in a Box) initiative.



GEO BON at the Zoological Society of London Symposium: Remote Sensing for Conservation: Uses, Prospects and Challenges

Mike Gill

The Remote Sensing for Conservation Symposium was held on May 22nd and 23rd at the Zoological Society of London. The symposium was co-organized by Nathalie Pettorelli (ZSL), Martin Wegmann (University of Wurzburg and DLR) and Woody Turner (NASA) - the latter two being members of GEO BON's Advisory Board. The main purpose of the symposium was to explore opportunities for bringing the remote sensing and conservation communities closer together to better harness the opportunities offered by remote sensing for informing effective conservation decisions. Twenty-four presentations over the two day symposium covered many aspects of utilizing remotely sensed data: from monitoring pressures on biodiversity to monitoring the state of biodiversity to better informing responses to the conservation crisis. GEO BON's Essential Biodiversity Variables were repeatedly identified by multiple speakers as an effective framework for identifying key intersections between the remote sensing and conservation community.



GEO BON WG3: How suitable is expert knowledge for species distribution modeling?

Andrew Skidmore



A PhD thesis on "Knowledge oriented species distribution modeling" was defended at ITC, University Twente, by Aidin Niamir. This dissertation aims to contribute to understanding if and to what extent the incorporation of expert knowledge into species distribution models enhances the performance of those models. The key factor to successfully improve the performance of a species distribution model using expert knowledge is to get experts involved in each and every step of the modelling, from hypothesis generation to visualisation of the outputs. Part of the dissertation is dedicated to providing evidence that incorporation of expert knowledge into a species sampling scheme significantly improves the discriminating capacity of models at a resolution 100 times finer than that of available species atlas data.

[See the full thesis](#)

[See a short version](#)

EU BON: DINA Technical Workshop

Karin Karlsson

The Swedish Museum of Natural History will in September be hosting a "DINA Technical Workshop - Alpha version of mobilization system" under the auspices of EU BON. Target group for the workshop will be programmers, developers and system engineers. The workshop is also open to anybody who are interested to [learn more](#) about the DINA-system.



EU BON: New indicator to track impacts of land-use change on biodiversity



Sergi Herrando

Researchers from the EU-BON project have developed an indicator to track the impact of land use changes on biodiversity using data from large-scale monitoring projects. The study, [recently published](#) in Ecological Indicators, shows a clear impact of land abandonment on birds in the north-east of the Iberian Peninsula. The methodology proposed could be employed to inform decision-makers about the annual rate of increase or decrease on wildlife populations as consequence of a particular driving force.



GlobWetland Africa

Jörg Freyhof

GlobWetland Africa is a large EO application project that will aim at facilitating the exploitation of satellite observations to support effective management of wetlands and wise use of associated resources in Africa.

The principal objective of the project will be to help African stakeholders (i.e. Ramsar Contracting Parties, Ramsar regional networks and African river basin authorities, etc.) and international/regional conservation agencies active in Africa to better assess the conditions of the wetlands under their areas of jurisdiction/study, and better monitor their trends over time.



[Learn more](#)

IUCN World Heritage Outlook

Elena Osipova

Launched at the 38th annual meeting



of the World Heritage Committee in Doha, Qatar, the IUCN World Heritage Outlook aims to close a knowledge gap on natural World Heritage sites



About the IUCN World Heritage Outlook

by compiling assessments of each natural site inscribed on the World Heritage List. Until now, less than half of all natural sites - those affected by serious conservation issues - have been regularly tracked through joint monitoring by UNESCO and IUCN, in its role as advisory body on natural World Heritage. Developed by IUCN and its World Commission on Protected Areas, the IUCN World Heritage Outlook now also profiles well-managed sites, as well as drawing attention to the need to improve the prospects of sites under threat. This marks a first step toward recognising the role that World Heritage sites have in pioneering conservation success. IUCN will present full global and regional reports at the 2014 World Parks Congress, 12-19 November 2014.

[The full news story](#)

[World Heritage Outlook website](#)

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